Response Under 37 C.F.R. 1.116 Applicant: Kenneth M. Adams et al.

Serial No.: 10/657,915 Filed: September 9, 2003

Docket No.: M190.145.101 / P0000263.00 US

Title: SURGICAL MICRO-BURRING INSTRUMENT AND METHOD OF PERFORMING SINUS SURGERY

## IN THE CLAIMS

1.(Previously Presented) A surgical micro-burring instrument comprising:

an outer tubular member having a proximal section, an intermediate section, a distal section, and a central lumen extending from the proximal section to the distal section, the distal section forming:

a pocket fluidly connected to the central lumen, the pocket having a bottom surface and an opposed upper opening,

an elevator tip extending distal the pocket,

a proximal portion proximal the pocket, the proximal portion forming a tube,

wherein the pocket is defined by a side wall having an upper edge including a proximal zone extending from the proximal portion, an intermediate zone extending from the proximal zone, and a distal zone extending from the intermediate zone to a distal-most end of the pocket at which the central lumen terminates.

and further wherein relative to an orientation of the outer tubular member in which the bottom surface is the lowest-most surface of the pocket:

the proximal zone extends downwardly from the proximal portion toward the bottom surface.

the intermediate zone extends from the proximal zone at an angle of extension relative to the proximal zone that differs from an angle of extension of the proximal zone relative to the proximal portion,

the distal zone extends downwardly from the intermediate zone toward the bottom surface at an angle of extension differing from the angle of extension of the intermediate zone relative to the proximal zone; and

an inner tubular member rotatably received within the central lumen, a distal end of the inner tubular member forming a bur positioned within the pocket, such that upon

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final assembly, at least a portion of the bur is exposed relative to the outer tubular

member via the upper opening of the pocket.

2.(Previously Presented) The instrument of claim 1, wherein the elevator tip distally extends

at least 0.05 inch relative to the distal-most end of the pocket.

3.(Original) The instrument of claim 2, wherein the elevator tip includes an upper surface

extending from the distal-most end of the pocket, the upper surface including a proximal region

and a distal region, wherein at least a portion of the distal region extends from the proximal

region in an angular fashion in longitudinal cross-section.

4.(Original) The instrument of claim 3, wherein the angular extension of the distal region

defines an included angle in the range of 10° - 50° relative to a central axis of the outer tubular

member.

5.(Original) The instrument of claim 4, wherein the included angle is approximately 20°.

6.(Original) The instrument of claim 4, wherein the included angle is approximately 40°.

7.(Previously Presented) The instrument of claim 3, wherein at least a portion of the

proximal region of the upper surface of the elevator tip extends downwardly from the distal-most

end of the pocket.

8.(Original) The instrument of claim 7, wherein the proximal region is curved in longitudinal

cross-section.

9.(Previously Presented) The instrument of claim 1, wherein the elevator tip terminates in a

distal end point, and further wherein the distal end point is laterally above the distal-most end of

is below the upper opening.

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the pocket when the outer tubular member is oriented such that the bottom surface of the pocket

10.(Previously Presented) The instrument of claim 1, wherein the proximal zone extends from the proximal portion in an angularly downward fashion.

11.(Original) The instrument of claim 10, wherein angular extension of the proximal zone defines an included angle in the range of 100°- 140° relative to a central axis of the proximal portion.

12.(Original) The instrument of claim 11, wherein the included angle is approximately 120°.

13.(Previously Presented) The instrument of claim 1, wherein the intermediate zone is parallel with a central axis of the proximal portion.

14.(Cancelled)

15.(Previously Presented) The instrument of claim 1, wherein the bottom surface forms at least one opening fluidly connected to an irrigation source.

16.(Original) The instrument of claim 15, further comprising:

an irrigation tube extending exteriorly along the outer tubular member and fluidly connected to the at least one opening.

17. (Previously Presented) The instrument of claim 1, wherein upon final assembly, a distal end of the bur is longitudinally spaced from the distal-most end point.

18.(Original) The instrument of claim 1, further comprising:

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an aspiration passage extending through the outer tubular member for aspirating cut

tissue.

19.(Original) The instrument of claim 18, wherein the inner tubular member forms a lumen

defining the aspiration passage with the bur forming an opening at a distal end thereof, and

further wherein the opening is in fluid communication with the lumen of the inner tubular

member.

20.(Original) The instrument of claim 1, wherein the intermediate section of the outer tubular

member defines a longitudinal bend.

21.(Original) The instrument of claim 20, wherein the longitudinal bend is approximately 12°

relative to a central axis defined by the proximal section.

22.(Original) The instrument of claim 1, wherein the instrument is adapted for use in a

septoplasty procedure.

23.(Original) The instrument of claim 1, wherein the elevator tip is selectively axially moveable

relative to the bur.

24.(Original) The instrument of claim 23, further comprising:

an intermediate tubular member co-axially disposed between the inner tubular member

and the outer tubular member, the intermediate tubular member forming a distal

window through which at least a portion of the bur is exposed;

wherein the outer tubular member is slidably received over the intermediate tubular

member.

25. - 30.(Cancelled)

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31.(Previously Presented) The instrument of claim 1, wherein the bur forms a plurality of

cutting flutes.

32.(Previously Presented) The instrument of claim 1, wherein the bur has a shape selected

from the group consisting of cylindrical, spherical, hemispherical, ellipsoidal, and pear.

33.(Previously Presented) The instrument of claim 1, wherein the distal-most end is below a

central axis of the central lumen when the outer tubular member is spatially oriented such that

the bottom surface is a lowest-most surface of the pocket.

34.(Previously Presented) The instrument of claim 1, wherein the bottom surface forms a

plurality of ports opposite the upper opening.

35.(Previously Presented) The instrument of claim 19, wherein the distal end opening formed

by the bur is in an axial opening, and further wherein the upper edge is shaped such that when

the bur is in a distal-most position relative to the distal-most end of the pocket, the opening is

unobstructed by the outer tubular member.

36.(Previously Presented) The instrument of claim 1, wherein the bur is configured to remove

hard bone with rotation of the inner tubular member.